INDEX

ABRAMOWITZ, M. See Steinberg, A. G., 107.
Affine geometry (Menger), 486.
Algebras (Brauer), 243.
Analytic functions (Walsh and Seidel), 337; (Walsh), 477.
ANDERSON, R. L. See Beadle, G. W., 80.
Anemone, Pacific Coast (Fox and Moe), 230.
Approximation (Walsh), 477.
Archaeology of Southeast Asia (deTerra), 407.
Ascorbic acid (Bonner and Bonner), 70.
Asia, Southeastern (deTerra), 407.
Astacene-like carotenoid (Fox and Moe), 230.
Asymmetry of light curves (Gaposchkin), 1.
Autosomal linkage in man (Burks), 512.
Auxin (van Overbeek), 42; (van Overbeek and Bonner), 260.
Axiom of choice (Gödel), 556.

BABCOCK, H. D. Some Recent Observations of Sunspot Spectra, 525.
Bacterial populations (Gordon), 212.
Bar eye of Drosophila Melanogaster (Chevais, Ephrussi and Steinberg), 365.
Bar "locus" and the v^+ reaction (Steinberg and Abramowitz), 107.
Barium stearate (Buchwald, Gallagher, Haskins, Thatcher and Zahl), 204.
BATE, R. C. See Kaufmann, B. P., 368.
BATEMAN, H. The Lift and Drag Functions for an Elastic Fluid in Two Dimensional Irrotational Flow, 246.
——. Rayleigh Waves, 315.
——. Coulomb's Function, 321.
BEADLE, G. W., ANDERSON, R. L., AND MAXWELL, J. A Comparison of the Diffusible Substances Concerned with Eye Color Development in Drosophila, Ephestia and Habrobracon, 80.
BERNSTEIN, F. The Continuumproblem, 101.
Bioelectric potentials, calculations of (Hill and Osterhout), 312.
BIRKHOFF, G. Dependent Probabilities and Spaces (L), 154.
BLINKS, L. R., AND SKOW, R. K. The Time Course of Photosynthesis as Shown by the Glass Electrode, with Anomalies in the Acidity Changes, 413.
——. The Time Course of Photosynthesis as Shown by a Rapid Electrode Method for Oxygen, 420.
BLUMENTHAL, L. M., AND THURMAN, G. R. The Characterization of Pseudo-$S_{n,r}$ sets, 557.
BOK, B. J., AND LINDSAY, E. M. Note on the Stellar Distribution in the Vicinity of a Southern Galactic Window, 4.
BONNER, D. See Bonner, J., 70.
BONNER, J., AND BONNER, D. Ascorbic Acid and the Growth of Plant Embryos, 70.
BONNER, J., AND BUCHMAN, E. R. Syntheses Carried Out in Vivo by Isolated Pea Roots: I, 431.
BONNER, J. See van Overbeek, J., 260.
Boundary conditions (Calkin), 38.
BRAUER, R. On Normal Division Algebras of Index 5, 243.
BRINK, R. A., AND COOPER, D. C. Partial Self-Incompatibility in Medicago Sativa, 497.
BROWN, F. A., JR. An Internal Secretion Affecting Viability in Crustacea, 551.
BUCHMAN, E. R. See Bonner, J., 431.
BUCHWALD, C. E., GALLAGHER, D. M., HASKINS, C. P., THATCHER, E. M., AND ZAHL, P. A. Measurements of Resistance and Capacity of Monofilms of Barium Stearate, 204.
BURKS, B. S. On the Relative Contributions of Nature and Nurture to Average Group Differences in Intelligence, 276.
——. Autosomal Linkage in Man—The Recombination Ratio between Congenital Tooth Deficiency and Hair Color, 512.

Calculus, differential (Michal), 340.
Calculus of variations (Herzberger), 466.
CALKIN, J. W. Abstract Self-Adjoint Boundary Conditions, 38.
Capacity of Monofilms (Buchwald, Gallagher, Hoskins, Thatcher and Zahl), 204.
CARLSON, J. G. Mitotic Behavior of Induced Chromosomal Fragments Lacking Spindle Attachments in the Neuroblasts of the Grasshopper, 500.
Carotenoid, astacene-like (Fox and Moe), 230.
Catfish, color changes of (Osborn), 121.
Chemicals, effect of on lethal mutation rate (Law), 546.
CHEVAIS, S., EPHRUSSI, B., AND STEINBERG, A. G. Facet Number and the v^+ Hormone in the Bar Eye of Drosophila Melanogaster, 365.
Chick embryos (Willier and Rawles), 446.
Chromatids (Kaufmann and Bate), 368.
Chromosome numbers (Wipf and Cooper), 87.
Chromosome phylogeny (McClung), 439
Chromosomes, polytene (Cooper), 452.
DE CICCO, J. See Kasner, E., 34, 393.
Clebsch-Gordan formula (Murnaghan), 182.

INDEX

ABRAMOWITZ, M. See Steinberg, A. G., 107.
Affine geometry (Menger), 486.
Algebras (Brauer), 243.
Analytic functions (Walsh and Seidel), 337; (Walsh), 477.
ANDERSON, R. L. See Beadle, G. W., 80.
Anemone, Pacific Coast (Fox and Moe), 230.
Approximation (Walsh), 477.
Archaeology of Southeast Asia (deTerra), 407.
Ascorbic acid (Bonner and Bonner), 70.
Asia, Southeastern (deTerra), 407.
Astacene-like carotenoid (Fox and Moe), 230.
Asymmetry of light curves (Gaposchkin), 1.
Autosomal linkage in man (Burks), 512.
Auxin (van Overbeek), 42; (van Overbeek and Bonner), 260.
Axiom of choice (Gödel), 556.

BABCOCK, H. D. Some Recent Observations of Sunspot Spectra, 525.
Bacterial populations (Gordon), 212.
Bar eye of Drosophila Melanogaster (Chevais, Ephrussi and Steinberg), 365.
Bar "locus" and the v^+ reaction (Steinberg and Abramowitz), 107.
Barium stearate (Buchwald, Gallagher, Haskins, Thatcher and Zahl), 204.
BATE, R. C. See Kaufmann, B. P., 368.
BATEMAN, H. The Lift and Drag Functions for an Elastic Fluid in Two Dimensional Irrotational Flow, 246.
——. Rayleigh Waves, 315.
——. Coulomb's Function, 321.
BEADLE, G. W., ANDERSON, R. L., AND MAXWELL, J. A Comparison of the Diffusible Substances Concerned with Eye Color Development in Drosophila, Ephestia and Habrobracon, 80.
BERNSTEIN, F. The Continuumproblem, 101.
Bioelectric potentials, calculations of (Hill and Osterhout), 312.
BIRKHOFF, G. Dependent Probabilities and Spaces (L), 154.
BLINKS, L. R., AND SKOW, R. K. The Time Course of Photosynthesis as Shown by the Glass Electrode, with Anomalies in the Acidity Changes, 413.
——. The Time Course of Photosynthesis as Shown by a Rapid Electrode Method for Oxygen, 420.
BLUMENTHAL, L. M., AND THURMAN, G. R. The Characterization of Pseudo-$S_{n,r}$ sets, 557.
BOK, B. J., AND LINDSAY, E. M. Note on the Stellar Distribution in the Vicinity of a Southern Galactic Window, 4.
BONNER, D. See Bonner, J., 70.
BONNER, J., AND BONNER, D. Ascorbic Acid and the Growth of Plant Embryos, 70.
BONNER, J., AND BUCHMAN, E. R. Syntheses Carried Out in Vivo by Isolated Pea Roots: I, 431.
BONNER, J. See van Overbeek, J., 260.
Boundary conditions (Calkin), 38.
BRAUER, R. On Normal Division Algebras of Index 5, 243.
BRINK, R. A., AND COOPER, D. C. Partial Self-Incompatibility in Medicago Sativa, 497.
BROWN, F. A., JR. An Internal Secretion Affecting Viability in Crustacea, 551.
BUCHMAN, E. R. See Bonner, J., 431.
BUCHWALD, C. E., GALLAGHER, D. M., HASKINS, C. P., THATCHER, E. M., AND ZAHL, P. A. Measurements of Resistance and Capacity of Monofilms of Barium Stearate, 204.
BURKS, B. S. On the Relative Contributions of Nature and Nurture to Average Group Differences in Intelligence, 276.
——. Autosomal Linkage in Man—The Recombination Ratio between Congenital Tooth Deficiency and Hair Color, 512.

Calculus, differential (Michal), 340.
Calculus of variations (Herzberger), 466.
CALKIN, J. W. Abstract Self-Adjoint Boundary Conditions, 38.
Capacity of Monofilms (Buchwald, Gallagher, Hoskins, Thatcher and Zahl), 204.
CARLSON, J. G. Mitotic Behavior of Induced Chromosomal Fragments Lacking Spindle Attachments in the Neuroblasts of the Grasshopper, 500.
Carotenoid, astacene-like (Fox and Moe), 230.
Catfish, color changes of (Osborn), 121.
Chemicals, effect of on lethal mutation rate (Law), 546.
CHEVAIS, S., EPHRUSSI, B., AND STEINBERG, A. G. Facet Number and the v^+ Hormone in the Bar Eye of Drosophila Melanogaster, 365.
Chick embryos (Willier and Rawles), 446.
Chromatids (Kaufmann and Bate), 368.
Chromosome numbers (Wipf and Cooper), 87.
Chromosome phylogeny (McClung), 439
Chromosomes, polytene (Cooper), 452.
DE CICCO, J. See Kasner, E., 34, 393.
Clebsch-Gordan formula (Murnaghan), 182.

Colchicine effects (Eigsti), 56.
Colloids, soil (Jenny and Overstreet), 384.
Color changes of the catfish (Osborn), 121.
Color of meteorites (Watson), 532.
Common vetch (Wipf and Cooper), 87.
Conformal geometry (Kasner and de Cicco), 393.
Continuum-hypothesis (Gödel), 556.
Constants, dimensionless (Haas), 274.
Continuumproblem (Bernstein), 101.
COOPER, D. C. See Wipf, L., 87, Brink, R. A., 497.
COOPER, K. W. Concerning the Origin of the Polytene Chromosomes of Diptera, 452.
Corpus Allatum (Scharrer and Hadorn), 236.
Coulomb's function (Bateman), 321.
COURANT, R. The Existence of a Minimal Surface of Least Area Bounded by Prescribed Jordan Arcs and Prescribed Surfaces, 97.
——. Remarks on Plateau's Problem and Douglas' Problem, 519.
CROZIER, W. J., AND HOLWAY, A. H. On the Law for Minimal Discrimination of Intensities. III, 130.
CROZIER, W. J., WOLF, E., AND ZERRAHN-WOLF, G. On the Duplexity of Visual Response in Vertebrates, 125.
——. Temperature and the Critical Intensity for Response to Visual Flicker, 216.
——. Specific Constants for Visual Excitation. II, 221.
CROZIER, W. J., AND WOLF, E. On the Duplexity Theory of Visual Response in Vetebrates. II, 538.
——. Specific Constants for Visual Excitation. III, 542.
Crustacea (Brown), 551.
Curve, Jordan space (Douglas), 490.
Curves, transversal (Herzberger), 466.
Cyclotomic fields (Vandiver), 330.

Dependent probabilities (Birkhoff), 154.
Derivatives of functions (Walsh and Seidel), 337.
Differential calculus (Michal), 340.
Diffusible substances concerned with eye color (Beadle, Anderson and Maxwell), 80.
Dilution method (Gordon), 212.
DILWORTH, R. P. See Ward, M., 162.
Dimensionless constants of physics (Haas), 274.
Diptera (Cooper), 452.
Distribution of gene frequencies (Wright), 253.
DOERING, C. R., AND FORBES, A. L. A Skeleton Life Table, 400.
DOUDOROFF, P. See Sumner, F. B., 459, 463.
DOUGLAS, J. Remarks on Riemann's Doctoral Dissertation, 297.
——. Minimal Surfaces of Higher Topological Structure, 343.
——. Green's Function and the Problem of Plateau, 353.
——. The Most General Form of the Problem of Plateau, 360.
——. A Jordan Space Curve Having the Infinite Area Property at Each of Its Points, 490.
Drag functions (Bateman), 246.
Drosophila (Beadle, Anderson and Maxwell), 80; (Kaufmann and Bate), 368.
Drosophila Melanogaster (Steinberg and Abramowitz), 107; (Scharrer and Hadorn), 236; (Chevais, Ephrussi and Steinberg), 365; (Law), 546.
Drosophila Virilis (Lebedeff), 165.
Drosophila, X-rayed (Haskins and Enzmann), 136.
Duplexity theory (Crozier, Wolf and Zerrahn-Wolf), 125; (Crozier and Wolf), 538.
Duplication, intercalary (Kaufmann and Bate), 368.

Early man (deTerra), 407.
Eggs, fucus (Whitaker), 85.
EIGSTI, O. J. A Cytological Study of Colchicine Effects in the Induction of Polyploidy in Plants, 56.
Einstein spaces (Fialkow), 30.
Elastic fluid (Bateman), 246.
Element transformations (Kasner and de Cicco), 34.
Embryo, chick (Willier, Rawles and Koch), 176; (Willier and Rawles), 446.
Embryos, plant (Bonner and Bonner), 70.
ENZMANN, E. V. See Haskins, C. P., 136.
Eocene (Stock), 288.
Ephestia (Beadle, Anderson and Maxwell), 80.
EPHRUSSI, B. See Chevais, S., 365.
Epiactis Prolifera (Fox and Moe), 230.
Excitation, visual (Crozier and Wolf), 542.
Expanding universe (Shapley), 148.
Extensions of measure (MacNeille), 188.
Extraction of auxin (van Overbeek), 42.
Eye color development (Beadle, Anderson and Maxwell), 80.

Facet number (Chevais, Ephrussi and Steinberg), 365.
Feather characterization (Willier and Rawles), 446.
FIALKOW, A. Einstein Spaces in a Space of Constant Curvature, 30.
Fields, cyclotomic (Vandiver), 330.
Fishes, disease in (Sumner and Doudoroff), 463.
FLETCHER H. The Mechanism of Hearing as Revealed Through Experiment

on the Masking Effect of Thermal Noise, 265.
Flicker, visual (Crozier, Wolf and Zerrahn-Wolf), 216.
Flow, two dimensional irrotational (Bateman), 246.
Fluid, elastic (Bateman), 246.
Foraminifera, life cycle of (Myers), 10.
FORBES, A. L. See Doering, C. R., 400.
Forms, representation and equivalence of (Oldenburger), 193.
FOSTER, A. L. Natural systems, 185.
FOX, D. L., AND MOE, C. R. An Astacene-Like Carotenoid from a Pacific Coast Anemone, Epiactis Prolifera, 230.
FRED, E. B., WILSON, P. W., AND WYSS, O. Light Intensity and the Nitrogen Hunger Period in the Manchu Soybean, 46.
Fucus eggs (Whitaker), 85.
Function, Coulomb's (Bateman), 321.
Function, Green's (Douglas), 353.
Functional topology (Morse), 326.
Functions, analytic (Walsh and Seidel), 337; (Walsh), 477.

GALLAGHER, D. M. See Buchwald, C. E., 204.
Galactic window, Southern (Bok and Lindsay), 4.
Gambusia (Sumner and Doudoroff), 459.
GAPOSCHKIN, S. Asymmetry of Light Curves in the Great Sequence as a Function of Frequency of Period, 1.
Garden pea (Wipf and Cooper), 87.
Gene frequencies (Wright), 253, 372.
Generators, of groups (Miller), 17, 91, 94, 561.
Geological discoveries (deTerra), 407.
Geometry (Menger), 486.
Geometry, conformal (Kasner and de Cicco), 393.
GÖDEL, K. The Consistency of the Axiom of Choice and of the Generalized Continuum-Hypothesis, 556.
GORDON, R. D. Note on Estimating Bacterial Populations by the Dilution Method, 212.
Grasshopper, mitosis in (Carlson), 500.
Great Sequence, light curves in (Gaposchkin), 1.
Green's function (Douglas), 353.
Group, real orthogonal (Murnaghan), 184.
Groups (Richardson), 21.
Groups (Miller), 17, 91, 94, 199, 202, 293, 333, 473, 561.
Growth of plant embryos (Bonner and Bonner), 70.
GUTH, E., AND HAAS, A. E. The Relations between Stefan's Radiation Law, Nernst's Heat Theorem and Maxwell's Formula for the Radiation Pressure, 224.

HAAS, A. E. The Dimensionless Constants of Physics, 274.
HAAS, A. H. See Guth, E., 224.
Habrobracon (Beadle, Anderson and Maxwell), 80.
HADORN, E. See Scharrer, B., 236.
Halicystis, potentials in (Osterhout), 75.
HASKINS, C. P., AND ENZMANN, E. V. A Determination of the Magnitude of the Cell "Sensitive Volume" Associated with the White-Eye Mutation on X-Rayed Drosophila. III, 136.
HASKINS, C. P. See Buchwald, C. E., 204.
Hearing, mechanism of (Fletcher), 265.
HECHT, S., AND PICKELS, E. G. The Sedimentation Constant of Visual Purple, 172.
HERZBERGER, M. Theory of Transversal Curves and the Connections between the Calculus of Variations and the Theory of Partial Differential Equations, 466.
Hilbert space (Hille), 159; (de Sz. Nagy), 559.
HILL, S. E., AND OSTERHOUT, W. J. V. Calculations of Bioelectric Potentials. III. Variation in Partition Coefficients and Ion Mobilities, 312.
HILL, S. E. See Osterhout, W. J. V., 427.
HILLE, E. On Semi-Groups of Transformations in Hilbert Space, 159.
HOLWAY, A. H. See Crozier, W. J., 130.
Homology groups (Richardson), 21.
Hormones, melanophore-dispersing (Osborn), 121.
Hormone, v^+ (Chevais, Ephrussi and Steinberg), 365.
Hormones, synthetic male (Willier, Rawles and Koch), 176.
Horn angles (Kasner and de Cicco), 393.
Host-graft combinations (Willier and Rawles), 446.
HUTCHINSON, G. E. Chemical Stratification and Lake Morphology, 63.

Infectious disease in fishes (Sumner and Doudoroff), 463.
Intelligence, Nature and nurture (Burks), 276.
Intensities, minimal discrimination of (Crozier and Holway), 130.
Intensity, critical (Crozier, Wolf and Zerrahn-Wolf), 216.
Internal secretion (Brown), 551.
Interpolation (Walsh), 477.
Integers, singular (Vandiver), 330.
Intersexuality in Drosophila Virilis (Lebedeff), 165.
Ion mobilities (Hill and Osterhout), 312.

JENNINGS, H. S. Sex Reaction Types and Their Interrelations in Paramecium Bursaria. I, 112.

——. Sex Reaction Types and Their Interrelations in Paramecium Bursaria. II. Clones Collected from Natural Habitats, 117.
JENNY, H., AND OVERSTREET, R. Contact Effects between Plant Roots and Soil Colloids, 384.
JONES, D. F. Translocation in Relation to Mosaic Formation in Maize, 208.
Jordan space curve (Douglas), 490.

KASNER, E., AND DE CICCO, J. Classification of Element Transformations by Means of Isogonal and Equi-Tangential Series, 34.
——. Conformal Geometry of Horn Angles of Second Order, 393.
KAUFMANN, B. P., AND BATE, R. C. An X-Ray Induced Intercalary Duplication in Drosophila Involving Union of Sister Chromatids, 368.
KAVANAGH, F. See Robbins, W. J., 141, 145, 229.
KOCH, F. C. See Willier, B. H., 176.

Lake morphology (Hutchinson), 63.
Lattices, residuated (Ward and Dilworth), 162.
LAW, L. W. The Effects of Chemicals on the Lethal Mutation Rate in Drosophila Melanogaster, 546.
LEBEDEFF, G. A. Intersexuality in Drosophila Virilis and Its Bearing on Sex Determination, 165.
LEFSCHETZ, S. On Locally Connected Sets and Retracts, 392.
LEWY, H. On the Existence of a Closed Convex Surface Realizing a Given Riemannian Metric, 104.
Life cycle of the foraminifera (Myers), 10.
Life table (Doering and Forbes), 400.
Lift functions (Bateman), 246.
Light curves, asymmetry of (Gaposchkin), 1.
Light intensity and nitrogen hunger (Fred, Wilson and Wyss), 46.
LINDSAY, E. M. See Bok, B. J., 4.
Linear topological spaces (Michal), 340.
Linkage, autosomal, in man (Burks), 512.
Log π and other constants (Uhler), 23.

MCCLUNG, C. E. Chromosome Phylogeny, 439.
MACNEILLE, H. M. Extensions of Measure, 188.
Maize (Jones), 208.
Maize, origin of (Mangelsdorf and Reeves), 303.
Maize seeds (Maxwell), 377.
Man, autosomal linkage in (Burks), 512.
Man, early (deTerra), 407.
MANGELSDORF, P. C., AND REEVES, R. G. The Origin of Maize, 303.
MAXWELL, J. See Beadle, G. W., 80.
MAXWELL, L. R. The Mechanism of Delayed Killing of Maize Seeds with X-Radiation, 377.
Measure, extensions of (MacNeille), 188.
Medicago Sativa (Brink and Cooper), 497.
Melanin content of Gambusia (Sumner and Doudoroff), 459.
Melanophore-dispersing hormones (Osborn), 121.
MENGER, K. A New Foundation of Non-Euclidean, Affine, Real Projective and Euclidean Geometry, 486.
Metagalactic density gradient (Shapley), 282, 527.
Meteorites (Watson), 532.
Metric, Riemannian (Lewy), 104.
MICHAL, A. D. Differential Calculus in Linear Topological Spaces, 340.
MILLER, G. A. Groups Having a Maximum Number Set of Independent Generators, 17.
——. Groups Having a Maximum Set of Independent Generators of the Same Order, 91.
——. Groups Having a Maximum Number Set of Conjugate Independent Generators, 94.
——. Relative Numbers of Operators and Subgroups of a Finite Group, 199.
——. Minimum Degree of Substitutions of Highest Degree in a Group, 202.
——. Largest Degree of a Substitution in the Groups of a Given Degree, 293.
——. Groups of Degree n Involving only Substitutions of Lower Degrees, 333.
——. The Relative Numbers of the Subgroups and Operators of Certain Groups, 473.
——. Groups of Order p^m Containing $m - \alpha$ Independent Generators, 561.
Minimal discrimination of intensities (Crozier and Holway), 130.
Minimal surfaces (Courant), 97; (Douglas), 343.
Mitotic behavior of induced chromosomal fragments (Carlson), 500.
Mixodectid (Stock), 288.
Mobilities, ion (Hill and Osterhout), 312.
MOE, C. R. See Fox, D. L., 230.
Monofilms (Buchwald, Gallagher, Haskins, Thatcher and Zahl), 204.
Morphology, lake (Hutchinson), 63.
MORSE, M. Functional Topology and Abstract Variational Theory, 326.
Mosaic formation in maize (Jones), 208.
MURNAGHAN, F. D. The Generalized Clebsch-Gordan Formula, 182.
——. The Analysis of Representations of the Real Orthogonal Group, 184.
Mutation, irreversible (Wright), 253.
Mutation rate, lethal (Law), 546.
Mutation, white-eye (Haskins and Enzmann), 136.
MYERS, E. H. The Present State of Our

Knowledge Concerning the Life Cycle of the Foraminifera, 10.

DE SZ. NAGY, B. On Semi-Groups of Self-adjoint Transformations in Hilbert Space, 559.
Natural systems (Foster), 185.
Nature and nurture (Burks), 276.
Nernst's heat theorem (Guth and Haas), 224.
Neuroblasts of grasshoppers (Carlson), 500.
Nitella (Osterhout and Hill), 427.
Nitrogen hunger of legumes (Fred, Wilson and Wyss), 46.
Noise, thermal (Fletcher), 265.
Non-Euclidean Geometry (Menger), 486.
Normal division algebras (Brauer), 243.

OLDENBURGER, R. Representation and Equivalence of Forms, 193.
Operators (Miller), 199, 473.
Origin of maize (Mangelsdorf and Reeves), 303.
Orthogonal group (Murnaghan), 184.
OSBORN, C. M. The Rôle of the Melanophore-Dispersing Hormone of the Pituitary in the Color Changes of the Catfish, 121.
OSTERHOUT, W. J. V. Potentials in Halicystis as Affected by Non-Electrolytes, 75.
OSTERHOUT, W. J. V., AND HILL, S. E. Reversal of the Potassium Effect in Nitella, 427.
OSTERHOUT, W. J. V. See Hill, S. E., 312.
VAN OVERBEEK, J. A Simplified Method for Auxin Extraction, 42.
VAN OVERBEEK, J., AND BONNER, J. Auxin in Isolated Roots Growing *in Vitro*, 260.
OVERSTREET, R. See Jenny, H., 384.

Paramecium Bursaria (Jennings), 112, 117.
Partial differential equations (Herzberger), 466.
Partition coefficients (Hill and Osterhout), 312.
Pea roots, syntheses by (Bonner and Buchman), 431.
pH, effect of (Whitaker), 85.
Photosynthesis, time course of (Blinks and Skow), 413, 420.
Phylogeny, chromosome (McClung), 439.
Physics, constants of (Haas), 274.
PICKELS, E. G. See Hecht, S., 172.
Pituitary (Osborn), 121.
Phycomyces Blakesleeanus (Robbins and Kavanagh), 141, 145.
Plateau's problem (Douglas), 353, 360; (Courant), 519.
Polyploid populations (Wright), 372.
Polyploidy in plants (Eigsti), 56.
Polytene chromosomes (Cooper), 452.
Populations, bacterial (Gordon), 212.
Populations of polyploids (Wright), 372.
Potassium effect in Nitella (Osterhout and Hill), 427.
Potentials, bioelectric (Hill and Osterhout), 312.
Potentials in halicystis (Osterhout), 75.
Primate, Tarsiid (Stock), 288.
Probabilities, dependent (Birkhoff), 154.
Projective geometry (Menger), 486.
Pseudo-$S_{n,r}$ sets (Blumenthal and Thurman), 557.
Pyrimidine specificity of (Robbins and Kavanagh), 141.

Radiation pressure (Guth and Haas), 224.
RAWLES, M. E. See Willier, B. H., 176, 446.
Rayleigh waves (Bateman), 315.
Red clover (Wipf and Cooper), 87.
REEVES, R. G. See Mangelsdorf, P. C., 303.
Reflectivity of meteorites (Watson), 532.
Representation and equivalence of forms (Oldenburger), 193.
Residuated lattices (Ward and Dilworth), 162.
Resistance of monofilms (Buchwald, Gallagher, Haskins, Thatcher and Zahl), 204.
Retracts (Lefschetz), 392.
RICHARDSON, M. Special Homology Groups, 21.
Riemannian metric (Lewy), 104.
Riemann's doctoral dissertation (Douglas), 297.
Ring-gland, structure of (Scharrer and Hadorn), 236.
ROBBINS, W. J. Organisms Requiring Vitamin B_1, 53.
ROBBINS, W. J., AND KAVANAGH, F. The Specificity of Pyrimidine for Phycomyces Blakesleeanus, 141.
——. The Specificity of Thiazole for Phycomyces Blakesleeanus, 145.
——. Evidence for a Second Thiamin, 229.
Roots, auxin in (van Overbeek and Bonner), 260.
Roots, pea (Bonner and Buchman), 431.
Roots, plant (Jenny and Overstreet), 384.

SCHARRER, B., AND HADORN, E. The Structure of the Ring-Gland (Corpus Allatum) in Normal and Lethal Larvae of Drosophila Melanogaster, 236.
Secretion, internal (Brown), 551.
Sedimentation constant (Hecht and Pickels), 172.
Seeds, maize (Maxwell), 377.
SEIDEL, W. See Walsh, J. L., 337.
Self-incompatibility in *Medicago Sativa* (Brink and Cooper), 497.

Semi-groups (Hille), 159; (de Sz. Nagy), 559.
Sespe (Stock), 507.
Sets, locally connected (Lefschetz), 392.
Sets, pseudo-$S_{n,r}$ (Blumenthal and Thurman), 557.
Sex (Willier, Rawles and Koch), 176.
Sex determination (Lebedeff), 165.
Sex reaction types (Jennings), 112, 117.
SHAPLEY, H. Note on the Problem of the Expanding Universe, 148.
——. A Metagalactic Density Gradient, 282.
——. Second Note on a Metagalactic Density Gradient, 527.
SKOW, R. K. See Blinks, L. R., 413, 420.
Soil colloids (Jenny and Overstreet), 384.
Soybean, Manchu (Fred, Wilson and Wyss), 46.
Space, Hilbert (Hille), 159; (de Sz. Nagy), 559.
Spaces, Einstein (Fialkow), 30.
Spaces (L) (Birkhoff), 154.
Spaces, linear topological (Michael), 340.
Spectra, sunspot (Babcock), 525.
Stefan's law (Guth and Haas), 224.
STEINBERG, A. G., AND ABRAMOWITZ, M. The Bar "Locus" and the v^+ Reaction in Drosophila Melanogaster, 107.
STEINBERG, A. G. See Chevais, S., 365.
Stellar distribution (Bok and Lindsay), 4.
STOCK, C. A Tarsiid Primate and a Mixodectid from the Poway Eocene, California, 288.
——. A Titanothere from the Type Sespe of California, 507.
Stratification, chemical (Hutchinson), 63.
Substitutions (Miller), 202, 293, 333.
SUMNER, F. B., AND DOUDOROFF, P. Some Effects of Light Intensity and Shade of Background upon the Melanin Content of Gambusia, 459.
——. The Effects of Light and Dark Backgrounds upon the Incidence of a Seemingly Infectious Disease in Fishes, 463.
Sunspot spectra (Babcock), 525.
Surfaces, closed convex (Lewy), 104.
Surfaces, minimal (Courant), 97; (Douglas), 343.
Syntheses by pea roots (Bonner and Buchman), 431.
Synthetic male hormones (Willier, Rawles and Koch), 176.
Systems, natural (Foster), 185.

Tarsiid primate (Stock), 288.
DETERRA, H. Preliminary Report on Recent Geological and Archaeological Discoveries Relating to Early Man in Southeast Asia, 407.
THATCHER, E. M. See Buchwald, C. E., 204.
Thermal noise (Fletcher), 265.
Thiamin (Robbins and Kavanagh), 229.
Thiazole, specificity of (Robbins and Kavanagh), 145.
THURMAN, G. R. See Blumenthal, L. M., 557.
Time course of photosynthesis (Blinks and Skow), 413, 420.
Titanothere (Stock), 507.
Tooth deficiency and hair color (Burks), 512.
Topological spaces, linear (Michal), 340.
Topology, functional (Morse), 326.
Transformations, element (Kasner and de Cicco), 34.
Transformations in Hilbert space (Hille), 159.
Transformations, selfadjoint (de Sz. Nagy), 559.
Translocation (Jones), 208.
Transversal curves (Herzberger), 466.

UHLER, H. S. Log π and Other Basic Constants, 23.
Universe, expanding (Shapley), 148.

VANDIVER, H. S. On Criteria Concerning Singular Integers in Cyclotomic Fields, 330.
Variational theory (Morse), 326.
Variations, calculus of (Herzberger), 466.
Vertebrates, visual responses in (Crozier, Wolf and Zerrahn-Wolf), 125; Crozier and Wolf), 538.
Visual excitation (Crozier, Wolf and Zerrahn-Wolf), 221; (Crozier and Wolf), 542.
Visual purple (Hecht and Pickels), 172.
Visual response (Crozier, Wolf and Zerrahn-Wolf), 125; (Crozier and Wolf), 542.
Vitamin B_1 (Robbins), 53.

WALSH, J. L., AND SEIDEL, W. On the Derivatives of Functions Analytic in the Unit Circle, 337.
WALSH, J. L. On Interpolation and Approximation by Functions Analytic and Bounded in a Given Region, 477.
WARD, M., AND DILWORTH, R. P. Residuated Lattices, 162.
WATSON, F. G. Reflectivity and Color of Meteorites, 532.
Waves, Rayleigh (Bateman), 315.
WHITAKER, D. M. The Effect of pH on the Development of Ultra-Centrifuged Fucus Eggs, 85.
WILLIER, B. H., AND RAWLES, M. E. Feather Characterization as Studied in Host-Graft Combinations between Chick Embryos of Different Breeds, 446.
WILLIER, B. H., RAWLES, M. E., AND KOCH, F. C. Biological Differences in the Action of Synthetic Male

Hormones on the Differentiation of Sex in the Chick Embryo, 176.
WILSON, P. W. See Fred, E. B., 46.
WIPF, L., AND COOPER, D. C. Chromosome Numbers in Nodules and Roots of Red Clover, Common Vetch and Garden Pea, 87.
WOLF, E. See Crozier, W. J., 125, 216, 221, 538, 542.
WRIGHT, S. The Distribution of Gene Frequencies under Irreversible Mutation, 253.
——. The Distribution of Gene Frequencies in Populations of Polyploids, 372.
WYSS, O. See Fred, E. B., 46.

X-Rayed Drosophila (Haskins and Enzmann), 136.

ZAHL, P. A. See Buchwald, C. E., 204.
ZERRAHN-WOLF, G. See Crozier, W. J., 125, 216, 221.